A SURVEY OF U.S. ARMY PUBLIC AFFAIRS OFFICERS' VIEWS ON ENVIRONMENTAL STEWARDSHIP TRAINING

A Thesis Presented to

the Faculty of the W. Page Pitt School of Journalism

and Mass Communications

Marshali University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Journalism

by

Thomas Alan Moyer

October 1993

94-01355

54 1 11 132

A SURVEY OF U.S. ARMY PUBLIC AFFAIRS OFFICERS' VIEWS ON ENVIRONMENTAL STEWARDSHIP TRAINING

A Thesis Presented to
the Faculty of the W. Page Pitt School of Journalism
and Mass Communications

Marshall University

In Partial Fulfillment of the Requirements for the Degree

Master of Arts in Journalism

DTIC QUALITY INSPECTED 5

by
Thomas Alan Moyer
October 1993

Acces	ion For	
DTIC	ounced	6
By_ Distrib	ution/	
А	vailability	Codes
Dist A-1	Avail and Specia	

TABLE OF CONTENTS

		Page
List of Ta	ables	ii
Chapter		
I.	THE PROBLEM	
	Statement of the Problem	1 2 3 5 6
II.	REVIEW OF LITERATURE	10
III.	METHODOLOGY	
	Design of Study	26 27 29 32
IV.	RESULTS	
	Demographic Information	38 38
v.	DISCUSSION	
	Conclusions	49 55
APPE	ENDIXES	
A. B. C. D.	Instrument	58 64 67 77
BIBI	JOGRAPHY	83

LIST OF TABLES

	Table	Page
1.	A list and definition of variables	34
2.	Effects of environmental concerns on the environmental curriculum	39
3.	Effects of environmental concerns on environmental training time	41
4.	Differences between military and Department of the Army civilians concerning environmental curriculum	43
5.	Differences between military and Department of the Army civilians concerning environmental training time	44
6.	Differences between military and Department of the Army civilians concerning individual confidence	47
7.	Respondents' confidence with regard to environmental issues	48

Chapter I

THE PROBLEM

Statement of the Problem

In August 1991 President George Bush targeted the environment as a National Security Strategy Objective. He committed the nation to achieving cooperative international solutions to key environmental challenges. Also, public concern for the environment and military base realignment and closure have helped push environmental issues to the forefront of Army policy making.

Within the Department of Defense, environmental cleanup has become a priority. According to several articles published in the April 1992 Public Affairs Monthly Update, fiscal year 1991 expenditures for the Defense Environmental Restoration Program topped \$1 billion, up from \$150 million in 1984. The U.S. Army controls more than 24 million acres of land at more than 2,000 installations. The Army during fiscal year 1991 spent close to \$322 million for environmental restoration activities at Army installations, with cleanup completed at 146 sites. Annual allocations of more than \$1 billion to environmental programs at Army installations were projected, including \$600 million budgeted to help installations comply with environmental requirements.

Money needed to fund environmental programs sufficiently surely will continue to grow in future years.

Because of the money involved with environmental issues and the priority these issues are receiving, environmental stewardship is a primary concern for the Army. In 1992 the Army published the <u>U.S. Army Environmental Strategy into the 21st Century</u>, which is a comprehensive strategy that will provide guidance for the Army to meet growing environmental challenges. One building block for the strategy is communication, with the primary focus being on public affairs.

Highly trained professionals will be required in every aspect of the environment to ensure compliance with the strictest state and federal regulations. At the same time effective communicators will be necessary to ensure the success of the strategy.

The Public Affairs Officer Course located at the Defense Information School, Fort Benjamin Harrison, Indiana, provides environmental training to Army public affairs officers and their Department of the Army civilian counterparts. The training only amounts to six hours of classroom-based instruction.

Given the new emphasis the Army is placing on the environment, is the time allocated for environmental training and the focus of that training at DINFOS sufficient to prepare public affairs officers for their roles in communicating "environmental stewardship?"

Purpose of the Study

This study investigated the environmental training offered as part of the Public Affairs Officer Course with regard to the time allocated for training, the content of the environmental curriculum and the confidence public affairs officers have in dealing with environmental issues once they have received the training.

The time dedicated to environmental issues and the material presented should be commensurate with the new emphasis on the environment. Also, the training that individuals receive should contribute to their confidence in communicating environmental stewardship.

The study investigated the following questions: Do those who have completed the training believe the amount of time dedicated to environmental issues and the environmental curriculum are sufficient in preparing public affairs officials for their role in communicating environmental stewardship? Does the environmental training build the public affairs employees' condifidence in dealing with environmental issues?

Significance of the Study

This study is important for the United State Army in that it provides a comprehensive review of how well those commenting on the environmental training conducted at the Public Affairs Officer Course believe public affairs officers are prepared to meet the challenges of environmental communications. It also shows whether they

believe this training supports the Army's environmental strategy, developed in 1992, that attempts to define the Army's leadership commitment and philosophy for meeting present and future environmental challenges.

One of the primary foundation blocks for the Army's strategy is communication. The "communication mission," outlined in the Army's environmental strategy, is primarily the responsibility of the public affairs community. For the public affairs community to execute the directives set forth in the strategy effectively, it must have fully-trained public affairs officers well-versed in environmental issues.

Until April 1992 officers attending the Public Affairs Officer Course received only three class hours of environmental training. As a result of a comprehensive review of the course's curriculum by representatives within the Department of Defense, this amount of training was determined to be inadequate. The number of hours devoted to environmental training was increased in April 1992 to six. To date, a comprehensive review has not been conducted to determine if the increase in time spent with environmental issues and the content of the curriculum are adequate. Also, a determination has not been made if this training has provided the necessary confidence to the public affairs officers for them to carry out the environmental communications challenge.

The public affairs officer must be prepared, especially

with the current round of base closings, to advise the commander and to keep the Army's vast publics informed on such issues as land management, endangered species and the possible threat of a nuclear or chemical accident.

Hypotheses

With the current emphasis on environmental stewardship within the Army, there must be environmentally qualified public affairs officials to professionally conduct internal and external environmental communications. Therefore, to determine the effectiveness of the environmental training that public affairs officials receive, the following hypotheses were tested:

- H1. Public affairs officers (both active duty and Department of the Army civilians) at Army bases/activities with environmental concerns will believe that more time needs to be allocated to environmental training than public affairs officers at bases/activities with few or no environmental concerns.
- H2. Public affairs officers (both active duty and Department of the Army civilians) at Army bases/activities with environmental concerns will believe that the environmental portion of the curriculum is less adequate than public affairs officers located at bases/activities with few or no environmental concerns.
- **H3.** Active duty public affairs officers and their DA civilian counterparts will have similar views on bothAthe

adequacy of the time allocated to environmental training and the current environmental curriculum.

H4. Public affairs officers (both active duty and DA civilians) will believe they are inadequately trained to deal with environmental communications/issues.

Assumptions and Limitations

Data collected will be slightly restricted by the methodology, as is the case in any study in which a population is surveyd by mail. For example, the study will be at the mercy of the population in that the rate of response is unknown and dependent on how important the subject is to respondents. However, a reminder will be sent to each individual of the population to encourage a high rate of response and a second mailing will serve the same purpose. Because public affairs employees were being questioned about the public affairs training they received, a high level of interest was expected, but unfortunately it did not contribute to an extremely high rate of response. The response rate was 58.75 percent.

The potential for loss of control was present, as questionnaires could have been completed by individuals no longer serving in public affairs assignments or who have since left the service, therefore yielding inaccurate results. By-name comparisons were done between the information released by the academic records section at the Defense Information School and information from the Office

of the Chief of Public Affairs to eliminate surveys being sent to individuals who did not belong to the population.

Therefore, the factor of who responded to the questionnaire was controlled as thoroughly as possible in a mail survey.

The entire population was selected to be studied. Only those individuals who were graduated from the Public Affairs Officer Course after April 1, 1992, and who were working in public affairs within the Department of the Army were selected. April 1 was used as the starting date because the Defense Information School instituted the new six-hour environmental curriculum on that date. The entire population was selected in order for the results to be generalized to future populations.

The analysis was limited to the study of the time devoted to the environmental curriculum, the subjects discussed and the confidence public affairs officials believe they possess after receiving the training. Often the time and the material taught may be sufficient, but factors such as student-to-teacher ratio, placement of the environmental curriculum into the general curriculum, teaching methods and other such variables may influence views. This study was intended to examine three factors, the time, the curriculum and individual confidence.

Many close-ended questions, the responses to which are easily assimilated, were included on the questionnaire. Two open-ended questions, however, gave respondents the

opportunity to write in their own answers. This type of response, while giving respondents more freeedom in answering questions, can make data more difficult to analyze. To compensate, respondents were informed that the two open-ended questions were voluntary. It was also determined that no formal analysis would be accomplished for these two questions, but that the individual responses would be reported.

Some of the language necessary to collect the information could have been confusing to the respondent. For instance, respondents were asked if the time allocated for the discussion of remediation was sufficient. Some respondents, especially those who were graduated on or about April 1, 1992, may not have remembered the discussion of this subject, but answered the question anyway. In an effort to reduce this confusion about terminology, the exact lesson plans of DINFOS instructors were used to determine the appropriate terminology so the researcher would not introduce a wrong interpretation and mislead respondents.

The best way to discover whether a questionnaire is adequately designed is to pretest it. However, this was not possible in this study. Although there was a pretest population of nine military public affairs officers available, only two from the pretest population had previously attended the Public Affairs Officer Course and one officer was a former instructor at the Defense

Information School. Of the three officers who could pretest the survey, two were contained in the actual population to be tested, leaving only one individual to pretest the survey. It was determined that instead of pretesting the survey it would be reviewed by the pretest group (minus the three individuals discussed above) with each individual critiquing it for any areas of misunderstanding or confusion.

Chapter II

REVIEW OF LITERATURE

Due to the environment being targeted as a National Security Strategy Objective, the Secretary of Defense, shortly after August 1991, established strict guidelines calling for the Department of Defense to be the federal leader in agency environmental compliance and protection (Env. Strategy 1).

With this guidance, the Army quickly published the <u>U.S.</u>

Army Environmental Strategy into the 21st Century. The

Army's environmental strategy provides the necessary

direction to attain the environmental vision. The strategy

harnesses the strengths of the Army (command leadership,

organization, and commitment to purpose) to ackieve

environmental stewardship (Env. Strategy 2). The Army's

environmental strategy model contains four pillars;

compliance, restoration, prevention and conservation. The

model also contains four key building blocks; people,

resources, communication, and management and organization

(Env. Strategy 2).

Within the people and communication building blocks

Army public affairs officers will interject their influences
and managerial abilities to ensure environmental stewardship
is developed and maintained.

The people building block envisions an environmental ethic institutionalized and interwoven into every aspect of

the Army's organizational culture (Env. Strategy 20). That all Army personnel will be trained to execute assigned duties in an environmentally sound manner is a primary objective for this building block.

The communication building block, as defined by the plan, involves both internal and external communication.

The Army believes "enhanced internal communication is essential to spread the environmental ethic, instill command emphasis, provide access to information systems and data bases, and maintain open dialogues at all Army levels on environmental issues and activities" (Env. Strategy 22). On the other hand, "effective external communication is necessary to support efficient program management, to understand the legislative and rule-making process, and to enhance cooperation with state and federal regulators, other public agencies, special interest groups, local communities, and industry" (Env. Strategy 22).

To build the communication block effectively the Army has established policy objectives:

- Promote active public affairs involvement in every aspect of environmental strategy implementation.
- Provide and promote access to electronic environmental communication and information systems.
- Provide effective analyses in support of the legislative and rule-making process.
- Establish open dialogues with special interest groups, local communities and industry.
- Disseminate policy on activities affecting the environment to all parts of the Army in an expeditious manner.
- Reduce conflict, obtain cooperation, and expedite actions with EPA regions and state and local regulators by establishing regional liaison offices.

- Build and strengthen continuous open dialogue at all levels within the Army on environmental activities and issues.
- Establish an environmental partnership based on cooperation with regulators* (Env. Strategy 22).

Within the Department of Defense, environmental cleanup has become a priority. In fiscal year 1991, expenditures for the Defense Environmental Restoration Program topped \$1 billion up from \$150 million in 1984 (Slear 1).

The U.S. Army controls more than 24 million acres of land at more than 2,000 installations (Kiernan 4). The Army, during fiscal year 1991, spent close to \$322 million for environmental restoration activities at Army installations. Cleanup was completed at 146 sites and was projected to allocate more than \$1 billion to its environmental programs, including \$600 million budgeted to help installations comply with environmental requirements (COE News 12).

Shortly after publication of the U.S. Army's environmental strategy in 1991, the Army's Chief of Public Affairs developed and published the environmental stewardship campaign plan, which echoes the ideas, policies and procedures of the Army's environmental strategy. Within the campaign plan two critical assumptions were discussed that seem to be the basis for its publication, "The environment will continue to be a national and international concern and media coverage of environmental issues will increase dramatically as problems become more apparent and

as the Army commits more resources to research and solutions" (Campaign Plan 3).

The plan also states, "Community relations will be the Public Affairs dimension of the Army's overall implementation plan for environmental stewardship once it is finalized. Command information efforts will emphasize the Environmental Stewardship Ethic and educate the Total Army in the four pillars of the Environmental Strategy" (Campaign Plan 2).

Again, within this particular plan the communications objectives are quite clear for public affairs officers. The campaign will emphasize a "master message" concerning environmental stewardship. "The Army will be a national leader in environmental and natural resource stewardship for present and future generations as an integral part of our mission" (Campaign Plan 5).

Communication will be the driving force for public affairs officers in attaining specific goals for both the environmental stewardship campaign plan and the Department of the Army's environmental strategy. Caron Chess, director of the environmental communication research program at Cook College, Rutgers University, suggests that communication can be as essential to solving environmental problems as other disciplines, such as science and law (46). Making changes in society's collective behavior will be crucial, and making these changes will require not only providing information to

organizations and individuals, but also putting more effort into communication (Chess 46). Chess states, "For communication to be part of the solution, environmental problem solvers have to plan for it. Because everyone communicates everyday, we take it for granted" (46).

Environmental stewardship through effective communications will be difficult considering the history of the nation and its general disregard for the environment. Only within the last 10 to 15 years has environmental stewardship penetrated the minds of government, business and the public. Riley E. Dunlap, professor of sociology and rural sociology at Washington State University, and Rik Scarce, Ph.D. candidate at Washington State University, conclude that while analyzing recent trends in environmental awareness individuals can see that growing majorities are beginning to see environmental problems as serious, worsening, and increasingly threatening to society's existence (651). Plus, these majorities are supporting government action to protect environmental quality and favor environment protection over economic growth (Riley & Scarce 651). The public is also increasingly leaning toward environmentalism, and there has been growth in both political and consumer actions in the name of environmental protection (Riley & Scarce 657).

Liza I. Garmulewicz suggests that for society to come to terms with environmental problems, individuals must look

at and recognize all the parts of environmental degradation and have a general concern for the system as a whole (2).

Garmulewicz also states "society must develop attitudes and behaviors that approach environmental issues from a holistic (emphasizing the organic or functional relation between parts and wholes) perspective" (2).

P. Sue Sadowske, marketing specialist at the University of Wisconsin, and Judith G. Adrian, project assistant at the University of Wisconsin, also support the conclusions of Dunlap and Scarce. Adrian sees a broad environmental ethic emerging within all facets of society and recognizes that environmentalism has emerged from increased recognition of environmental problems (16). Sadowske and Adrian also see the public making greater demands for more information about environmental risks and hazards and that business and communities are finally beginning to accept environmental ethics into their practices (16). Bruce E. Matthews, executive coordinator for the Coalition for Education in the Outdoors, defines environmental ethics as those "primarily concerned with developing a more personal sense of stewardship by all members of society, individually and collectively, regarding the use of the environment" (3).

With environmental activism on the rise and the overwhelming interest the public now has concerning environmental issues, it can be concluded that the Army will face considerable scrutiny when it comes to its

environmental policies.

Rosanne Fortner, associate professor for the School of Natural Resources at The Ohio State University, suggests that "most organizations that deal with the environment eventually find themselves in a position where intensive and interactive communications with the public seem absolutely necessary" (4).

E. Bruce Harrison, chairman of the E. Bruce Harrison Company (a professional consultancy specializing in environmental public policy), finds that public attitudes for environmental protection are putting pressure on many organizations to adopt policies that support environmental stewardship. Harrison also sees problems for companies if they do not take environmental stewardship far enough, particularly when it comes to involving the public relations department (225).

Larissa A. Grunig, assistant professor in the College of Journalism, University of Maryland, conducted a telephone survey of 200 organizations in the Pacific Northwest and found that nearly half surveyed suffered from the threat of external environmental opposition. She also found the government is a more frequent target of opposition than most other organizations (112). Grunig also concluded that spending money on public relations will improve an organization's chances of being successful in environmental stewardship and that environmental preparedness is a key of

organizational success (114-15).

These studies suggest that if the U.S. Army were to have well-trained public affairs officers capable of gathering, interpreting and disseminating information, its goals of compliance, restoration, prevention and conservation would be more easily achieved.

Larson, Zimmerman and Scherer suggest communication is the primary means by which learning takes place and shared cognitions are made possible (11). Mark A. Larson is an assistant professor in the Department of Journalism, Humboldt State University, Don Zimmerman is an assistant professor in the Department of Technical Journalism, Colorado State University, and Cliff Scherer is coordinator for the Educational Materials Project at Iowa State University.

C.J. Silas, Chairman and CEO for Phillips Petroleum, states organizations will have to be the champions of the environmental cause and that this can be accomplished through "study and understanding the implications of the public's increased environmental sensitivity, by taking the environmental initiative, and learning to communicate better" (34).

The Army's Environmental Strategy also sees education and training as critical elements of environmental stewardship. The strategy states, "Effective training and education are a cornerstone of the Army's success. Just as

good training is instrumental in winning wars on the battlefield, proper education and awareness will play a crucial role in implementing changes within the Army to promote environmental stewardship. Concern for the environment will be integral to all Army training activities" (Env. Strategy 24).

M.E. Marshall, president of Law Associates, and David W. Mayer, director of Law Companies Environmental Training Center, contend that "continual training has become indispensable in today's complex, changing environmental regulatory climate" (54). They said that due to the increase in regulations, at all levels of government, environmental training is a sound business practice (Marshall & Mayer 54). Marshall and Mayer also state environmental training will help employees keep environmental issues in their minds as they deal with their daily business practices (54). They state that upper management has the most to gain from sound environmental training because it can reduce costs and the likelihood of prosecution and fines and it could improve the overall image of the organization and its publics (Marshall & Mayer 54).

In today's environmentally conscious society,
environmental offenders are the targets of substantial
financial penalties from federal, state and local regulatory
agencies such as the Environmental Protection Agency.

Marshall and Mayer state the best defense against these

penalties is "a knowledgeable, environmentally aware work force. Environmental training can reduce the possibility that an employee will make a costly decision because of an incomplete understanding of environmental regulations" (54).

Marshall and Mayer conclude that management must continuously demonstrate concern for the environment through continued emphasis and through "regular environmental training sessions" (57). They contend that with "'top-down' leadership and emphasis, environmental training can be a significant tool in achieving an excellent balance of environmental awareness and sound decision making throughout the organization" (Marshall & Mayer 57).

Richard O. Peters defines environmental education as "an organized attempt to make people aware of the importance of natural phenomena in their lives, to develop perceptions re: the interdependence between humans and nature, and to instill in individuals a spirit of stewardship which will nurture actions to safeguard the quality of life not only for humans, but also to improve and protect the state of nature" (4). Peters suggests that attitudes concerning environmental stewardship can best be fostered in education programs designed for children and community-based awareness programs for adults, and technical information programs for government and private businesses (6).

David C. Engleson, supervisor of environmental education for the Wisconsin Department of Public

Instruction, supports the idea that education must develop a sense of environmental awareness (4). Engleson states, "Environmental education must prepare individuals to be responsive to a rapidly changing technological world, to understand contemporary world problems, and to provide the skills needed to play a productive role, as all citizens must, in the improvement and protection of the environment" (4). To accomplish this, Engleson suggests environmental education programs must be continuous, must be taught at all levels within the education system, and provide students with experiences that will assist in their education (4). Engleson also stresses the necessity of students becoming involved in an "active problem-solving process" that allows them to concentrate on environmental issues and problems within their respective communities (4).

Others studying environmental education also stress its importance.

Jean Forbes, senior lecturer in the Department of Town and Regional Planning, University of Glasgow, suggests environmental education should be a priority for all age groups and that environmental education can provide individuals the capability to understand their community and thereby the capability to participate in it (131).

Andrew H. Moyad, research associate at the Environmental Law Institute, also supports environmental education. Moyad states that despite the increase in public

concern for the environment, the system has failed to provide adequate training for environmental professionals and that environmental education still has not become an integral part of our nation's educational process (37).

Moyad emphasizes the need for the nation to place environmental awareness into the entire education process so that an adequate number of professionals who are environmentally conscious are available for the future (39).

Moyad said changes will not take place in environmental awareness if society does not provide education to young people, who are "the engines by which these changes will occur" (39).

Joseph M. Petulla, director of the graduate program in environmental management, University of San Francisco, is convinced that one of the two most important goals of environmental professionals is the development of a "solid curriculum that will provide both the technician and generalist with the background needed in the environmental field for critical thinking and problem solving" (197). He said environmental professionals within government should take on the role of negotiator and that this negotiator to be successful in providing consequences of a variety of problems and possible courses of action to management must have expert knowledge (Petulla 197).

With the growing trend for institutions to adopt environmental education into their curriculum and the

continued emphasis on the Army's Environmental Strategy, the Defense Information School, Fort Benjamin Harrison, Indiana, changed the amount of time dedicated to environmental training. Training increased from three hours of instruction to six during the spring of 1992 to improve training of public affairs officers about environmental issues.

The first two-hour block of instruction teaches the public affairs officer about the evolution of public and governmental environmental concern and activities, key laws which affect environmental decisions, the definition of remediation (to monitor the contamination if there is no specific danger to human health or the environment) and the resulting mandated actions and activities and finally the reasons for a environmental impact statement process (DINFOS PB.P1202 3).

The second two-hour block of instruction teaches:

- "1. The purpose for the Environmental Impact Statement (EIS) process;
 - The steps in the EIS process and points at which there are specific public affairs responsibilities;
- 3. The public affairs responsibilities in the environmental remediation mandated by the Installation Restoration Program IRP) and National Priorities List (NPL) legislation;
- 4. The specific public affairs involvement in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to include the Community Relations Plans (CRP);
- 5. The public affairs role in the CERCLA requirement that DoD coordinate with the state and local authorities" (DINFOS PB.P1302 3).

The final two-hour block of instruction provides the public affairs officer an opportunity to apply previous

environmental stewardship instruction to four separate case studies during class discussions (DINFOS PB.P1402 3-B8).

With the emphasis placed on environmental education and effective environmental communication by authors, researchers and military officials, is this amount of environmental training and the content of subjects covered at DINFOS sufficient for the public affairs officer to be successful in environmental stewardship?

David Stokes, Dean of the Faculty of Applied Science and Head of the Department of Environmental Studies,

Victoria College, and Bruce Crawshaw, lecturer at the

Universiti Pertanian Malaysia, caution about the problems of this type of environmental education. They state that within all levels of education a typical approach to environmental education is to "lay side-by-side a series of subjects which the 'teachers' know to be useful subjects such as ecology, economics, law, management, etc. (Stokes & Crawshaw 36). In the normal course of events, these subjects are taught more-or-less independently--often their only link is that they repeatedly use the word 'environment'" (Stokes & Crawshaw 36).

The Army has apparently taken this approach to its new environmental stewardship training for public affairs officers. Peters suggests that often when new courses are developed, such as environmental education, complaints sometimes arise concerning the lack of time and space within

that course (7). Peters also supports the ideas of Stokes and Crawshaw. Peters states, "Too often, the typical school day is overburdened with a 'little-bit-of-this' and a 'little-bit-of-that'; a 'little bit' of mathematics-reading-social studies-computer education-spelling-etc. Often, so little time is spent on any particular subject that nothing very meaningful is really accomplished" (7). Peters also states that while having many different types of course offerings, each subject is often "superficial and shallow; for lack of adequate time, space and materials" (7). Peters suggests that environmental training does not have to be a course that is added to a particular curriculum, but it can be integrated into all existing subject matter (7).

Finally, if the Army Public Affairs community is to be a major contributor to the success of the Army's environmental strategy, it must provide more time and space during the environmental program of instruction offered at the Defense Information School. John Paulk, chief of the skills and education development branch for the Tennessee Valley Authority (TVA), and Lynn Hodges, program manager for the environmental education program at the TVA, in looking at the future of environmental education, see the nation's leading professional organizations and educational institutions as needing to reinforce environmental education with all students and members (36-7).

In conclusion, Jean Forbes, senior lecturer in the

Department of Town and Regional Planning, University of Glasgow, said if education is a key to assist public affairs officers to be environmental communicators, the education must be able to identify the potential obstacles they often encounter so educators can develop the right curriculum for learning (133).

Chapter III

METHODOLOGY

Design of the Study

This study concentrated on Army public affairs officers and Department of the Army civilians who were graduated from the Public Affairs Officer Course at the Defense Information School since April 1, 1992, and who are serving in a Army public affairs assignment. This excluded those individuals who have attended the Public Affairs Officer Course, but who are not working in public affairs. April 1, 1992, was selected because that was the date when the number of hours dedicated to teaching environmental issues increased from three hours to six hours. The study examined whether the respondents believed there was sufficient time allocated to environmental issues and whether the material covered adequately prepared them to deal with environmental issues.

The entire population of officers and their Department of the Army civilian counterparts was selected for the study. The population contained 89 possible respondents. This included 42 Department of the Army civilians and 47 active-duty officers. A search for current addresses, determined that six active-duty officers were no longer serving in a public affairs position, therefore reducing the population to 83 (42 civilians; 41 officers). During the initial mailing, three questionnaires were returned unanswered because either the officer had been released from

active duty or the officer had been transferred out of public affairs. These three possible respondents were not included in the population because only those officers and civilians on active duty and working in public affairs were to be included. Therefore, the final population contained 80 possible respondents (42 civilian; 38 officers).

Addresses for respondents were provided by the Office of the Chief for Public Affairs, Headquarters Department of the Army, Washington, D.C., and the Dean of Academic Services, Defense Information School, Fort Benjamin Harrison, Indiana.

Ouestionnaire

The questionnaire (see Appendix A) was written especially for the person who has graduated from the Public Affairs Officers Course since the establishment of the new environmental curriculum. Part I of the questionnaire focused on demographic information (questions 1 - 12). These questions were both open response and closed response-yes/no questions. General demographic information concerning years of service, sex, age, degree earned (if any) and current position held were the main questions in this part. Part I also contained questions concerning the installation or activity where the respondents are serving. Questions regarding the number of hours repondents spend with environmental training, whether their installation or activity is on the Superfund list, and whether their

installation or activity has a separate environmental office with its own public affairs function. One important question (question 15) asked repondents to check a number of boxes that apply to their installation/activity concerning environmental problems they have experienced within the past five years. Possible responses included ground water contamination, storage of hazardous waste, land use management, endangered species, asbestos problems, and solid waste management. The responses received were used to correlate individual responses concerning time and curriculum with the number of environmental concerns each respondent's installation or activity has experienced over the past five years.

Part II of the questionnaire contained 14 Likert Scale questions (ranging from 1 = strongly disagree to 5 = strongly agree) dealing with the environmental curriculum. Questions concerning teaching methods, faculty preparation and content of each of the major issues presented during the environmental portion of the course were asked.

Part III of the questionnaire contained nine Likert

Scale questions (ranging from 1 = strongly disagree to 5 = strongly agree) dealing with the time allocated not only to the environmental curriculum in general, but to each of the major subjects presented during the course.

Part IV of the questionnaire contained eight Likert

Scale questions (ranging from 1 = strongly disagree to 5 =

strongly agree) with the emphasis being on the respondents' confidence in dealing with environmental communications after they have received the environmental training.

Part V of the questionnaire contained two open-ended questions that provided respondents an opportunity to comment on either the time allocated or the curriculum. These questions were voluntary. No content analysis was planned for the questions, but the respondents' individual comments are included (Appendix D).

Survey

In June 1993, cover letters (see Appendix B), questionnaires (see Appendix A), and self-addressed stamped envelopes were mailed to all individuals in the population. The self-addressed stamped envelopes were coded so individual responses could be monitored to reduce time and costs associated with a possible second mailing.

After one week, a reminder postcard was sent to all persons to remind them to send back the questionnaires as soon as possible.

The initial response, to the first mailing, was 38.75 percent. A second mailing was deemed necessary and was initiated in July 1993. A new cover letter (see Appendix B), the questionnaire (see Appendix A) and a self-addressed stamped envelope were sent to only those who had not responded to the first mailing. The self-addressed stamped envelope was coded with the words "second mailing" to ensure

accounting accuracy between first and second mailings. Sixteen additional surveys were returned during the second mailing. The overall response rate increased to 58.75 percent. Several additional questionnaires were received after the second mailing deadline and were not included in the data analysis, but the additional responses increased the response rate to more than 60 percent.

The 47 questionnaires returned were coded and put into the comptuer system at Marshall University between August 13 and August 24, 1993. The correlations and ANOVA's were done with the widely used statistics package SAS with the chi square analysis being accomplished without the assistance of any computer statistical package.

Pearson correlations were used to analyze hypotheses H1 and H2. The correlations were run between those questions dealing with the time allocated to environmental training (questions 31 - 39), those dealing with the environmental curriculum (questions 17 - 30) and the number of environmental concerns each respondent had checked in response to question 15. The analysis should reveal whether there is any correlation between a respondent's opinions about the environmental training content and time and the environmental curriculum and the number of environmental problems at their specific installation/activity.

Analysis of variance was used to test hypothesis H3.

Each respondent was coded as either being a Department of

the Army civilian or a military officer. ANOVAs were then accomplished on only those questions dealing with time, curriculum and confidence. This procedure tested for significant differences between the way civilians and military personnel answered the questions. This procedure was important because it was presumed civilians and military officers may have different opinions concerning the environmental training. Civilians are relatively stable in their current positions. They work day in and day out at the same job and rarely move from job to job or from one installation to another. A military officer may move from job to job every couple of months to every couple of years and may move from one installation to another in as little as two years. The military officer may also move out of the public affairs community for several years to fulfill other career requirements. The military officer may also be more likely to serve in a managerial position, whereas the civilian may serve in a line position. This may contribute to military officers' looking more favorably on the environmental training than their civilian counterparts.

To test hypothesis H4, chi-squares were used to test for significant differences between expected and actual frequencies to those questions that dealt with individual confidence (questions 41 - 48).

Demographic information was collected, coded and placed into the corresponding data base. This information is

useful in that it provides a general picture of the average respondent concerning sex, years of experience, age, degree(s) earned, grade/rank, and other pertinent information. This information is available in Appendix E and will be discussed in more detail later.

In coding the returned questionnaires, each possible answer was assigned a number with a restricted number of digits. For instance, years of experience was allowed a two-digit number. Whether a respondent obtained a bachelor's degree, however, was coded by assigning the number one to the answer "yes" and two to the answer "no." Each Likert Scale question (questions 17 - 48) was coded on a scale of one to five. Each demographic, curriculum, time and confidence question was assigned to a given variable name. These variables are explained in Table 1.

<u>Variables</u>

Throughout the questionnaire (see Appendix A), data were collected involving several variables. A complete listing of all variables also is contained in Table 1.

"Demographic variables" included sex, age, rank/grade, years of service, degrees earned, hours spent with environmental training and number of environmental problems their installation has experienced over the past five years.

"Curriculum variables" included whether: (1) the training received was academically demanding; (2) faculty members were prepared; (3) the curriculum was appropriate; (4) the

teaching methods were adequate; (5) the training was current; (6) the training was relevant; and (7) each subject taught was necessary; and (8) any other environmental subjects should be taught. "Time variables" included whether: (1) sufficient time was allocated for environmental training; (2) the time allocated for each subject taught was sufficient; and (3) the course needs to be extended to provide more time for environmental issues. "Confidence variables" included: (1) advising capabilities; (2) mass media communications capabilities; (3) whether respondents believed they were well versed in environmental issues; (4) whether they seek outside assistance for environmental matters; (5) handling of environmental emergencies; (6) communicating risk information; (7) how the training prepared them for the demands placed on public affairs officers.

Table 1

A list and definition of variables

SEX	Are you male or female; coded as follows: 1 male, 2 female
AGE	What is your age (coded by age reported by respondent)
PAOC	Whether respondent graduated from PAOC; coded as follows: 1 yes, 2 no
MILCIV	Whether respondent is military or civilian; coded as follows: 1 military, 2 civilian
YEARS	Number of years active federal service each respondent has (coded by years reported by respondent)
ВА	Whether respondent has a bachelor's degree; coded as follows: 1 yes, 2 no
MA	Whether respondent has a master's degree; coded as follows: 1 yes, 2 no
HOURS	Number of environmental training hours each respondent reported receiving (coded by hours reported by respondent)
AVG	Average number of hours each respondent currently spends with environmental issues per week (coded by hours reported by respondent)
CONCER	Number of environmental problems each respondent has experienced within past 5 years (coded by number of boxes checked from the list of 15 provided)
SUPER the	<pre>Is repondent's installation currently on "Superfund list"; coded as follows: 1 yes, 2 no</pre>
SEPAR	Does respondent's installation have a separate environmental office with own public affairs activity; coded as follows: 1 yes, 2 no

The following variables were coded based on a five-point Likert Scale according to the following numerical values:

- 5 = Strongly agree with the statement
- 4 = You agree more than you disagree with the statement
- 3 = You neither agree nor disagree with the statement
- 2 = You disagree more than you agree with the statement
- 1 = You strongly disagree with the statement

CURRICULUM VARIABLES

ACAD DEMANDING The training was academically demanding

FACULTY Faculty members were prepared

PREPARATION Curriculum is appropriate in preparing

public affairs officers

TEACHING METHODS Teaching methods were sufficient

CURRENT Environmental training is current

RELEVANCY Environmental training gave students a

firm understanding of all relevant

environmental issues

EMPHASIS Same emphasis placed on environmental

training as other subjects taught

throughout the course

EVOLUTION OF

CONCERN Information presented on evolution of

public and governmental concern and

activities was necessary

LAWS Information presented on environmental

law was necessary

REMEDIATION The discussion of remediation was

necessary

ENV IMPACT

STATEMENT Information presented on the

environmental impact statement was

necessary

COMP & LIAB ACT Information on the Compensation and

Liablility Act and the Community Relations Plan was necessary

CASE STUDIES Discussion of case studies was important

OTHER ISSUES Other environmental issues should be taught

TIME VARIABLES

SUFF TIME Sufficient time was allocated to environmental issues

LESS TIME More time provided to other subjects than provided to environmental issues

EVOLUTION OF

CONCERN

More time needs to be allocated for evolution of public and governmental concern and activities

LAWS More time needs to be allocated on environmental law

REMEDIATION More time needs to be allocated for the discussion of remediation

ENV IMPACT
STATEMENT More time needs to be allocated for the environmental impact statement

COMP & LIAB ACT More time needs to be allocated for the Compensation and Liablility Act and the Community Relations Plan

CASE STUDIES More time needs to be devoted to case study discussion

EXTEND COURSE The PAOC should be extended

CONFIDENCE VARIABLES

FOLLOW Environmental training is useful in follow-on assignment

ADVISING Feel confident advising commander or his staff on environmental communication issues

MEDIA Feel confident speaking with news media

representatives concerning environmental

issues

ASSIST Often seek assistance from other agencies

concerning environmental issues

QUALIFIED Qualified to handle all public affairs

activities during environmental emerg.

RISK Effectively communicate risk information

DEMANDS Environmental training provided good

preparation for demands placed on public

affairs officers

Chapter IV

RESULTS

Demographic Information

Data concerning the respondent group and the individual respondents were collected. Forty-seven respondents responded to the survey. The following demographic information was collected (also see Appendix C):

- Male = 25; Female = 22
- Military Officers = 22; DA Civilians = 25
- Bachelor's Degree = 40; Master's Degree = 8
- Average age = 35
- Average rank for officers = Captain
- Average grade for civilians = GS 9
- Average years of service = 10 12
- Average number of hours spent with environmental issues = 2.27

Statistical Analysis

Pearson correlations were used to test hypothesis one, that the more environmental concerns public affairs officials have the more likey they are to believe that the environmental curriculum is inadequate. Each of the curriculum variables was correlated with the CONCER variable (see Table 2). Only one statistically significant relationship emerged. Respondents' opinion that other issues relating to the environment should be taught during the Public Affairs Officers Course had a statistically significant positive relationship with the number of environmental concerns (r = 0.36623, p < .05). Most respondents believed that other environmental issues should be addressed during the course (M = 4.086, SD = .838).

Table 2

Effects of environmental concerns on the environmental curriculum*

CURRICULUM

<u>Variable</u>	Mean	SD	Concerns (r value)
Acad Demanding	2.659	1.068	0.14124
Faculty	3.361	1.071	0.24483
Preparation	3.000	1.142	0.23220
Teaching Methods	2.914	1.138	0.25048
Current	3.510	.856	0.25165
Relevancy	2.723	1.097	0.26346
Emphasis	2.500	1.224	0.16676
Evolution of Concern	3.782	. 892	0.02810
Laws	3.822	.777	0.00574
Remediation	3.755	.856	0.04454
Env. Impact Statement	3.888	.804	0.04498
Comp & Liab. Act	3.840	.775	0.01678
Case Studies	4.068	.728	0.01038
Teach Other Issues	4.086	.838	0.36623**

^{*} correlation between each curriculum variable and environmental concerns variable

^{**} Statistically significant at the .05 level

Respondents generally believed the subjects currently taught are relevant and necessary; but of all the curriculum questions, they most strongly agreed with this particular question, especially those respondents with more environmental concerns.

Correlations were also used with all time variables and the environmental concerns variable (see Table 3). Nine statistically significant correlations were noted. This lends support to the idea that the more environmental problems public affairs officers face, the more likely they are to believe more time needs to devoted to the entire environmental curriculum.

Public affairs officers, especially those with environmental concerns, believed insufficient time is dedicated to the entire environmental curriculum. The correlations provided the following significant findings:

- Insufficient time is dedicated to the environmental curriculum (r = 0.34353, p<.05)
- Respondents believed less time is provided to environmental issues then other issues taught during PAOC (r = 0.33707, p<.05)</p>
- Respondents believed more time needs to be allocated to discussion of how environmental concern and activities have evolved (r = 0.35206, p<.05)
- Respondents believe more time needs to be allocated for environmental law (r = 0.36464, p<.05)
- Respondents believe more time needs to be allocated for discussion of remediation (r = 0.41139, p<.01)
- Respondents believe more time needs to be allocated for the environmental impact statement (r = 0.34274, p<.05)
- Respondents believe more time needs to be allocated for the Compensation and Liability Act and the Community Relations Plan (r = 0.46691, p<.01)</p>
- Respondents believe more time needs to be allocated for case study discussions (r = 0.49614, p<.001)

Table 3

Effects of environmental concerns on environmental training time*

TIME

<u>Variable</u>	Mean	SD	Concerns (r value)
Suff. Time	2.782	1.133	0.34353**
Less Time	4.065	.879	0.33707**
Evolution of Concern	3.608	.954	0.35206**
Laws	3.695	.939	0.36464**
Remediation	3.695	1.008	0.41139***
Env. Impact Statement	3.543	1.026	0.34274**
Comp & Liab. Act	3.652	.971	0.46691***
Case Studies	3.595	.900	0.49614***
Extend Course	2.765	1.237	0.50313****

^{*} correlation between each time variable and environmental concerns variable

^{**} Statistically significant at the .05 level

^{***} Statistically significant at the .01 level

^{****}Statistically significant at the .001 level

- and tend to believe that PAOC should be extended to allow more time to be dedicated to environmental issues (r = 0.50313, p<.001).

Therefore, as the number of environmental concerns increases the more likely it is for a public affairs officer to believe that more time needs to be dedicated to environmental issues.

Analysis of variances were used on time, curriculum and confidence variables to test for significant differences between military officers and Department of the Army civilians.

ANOVAs revealed no significant differences between officers and civilians for curriculum variables (see Table 4) except for teaching methods employed by environmental instructors (F = 5.72, p < .05). Military officers tended to agree with the statement that teaching methods were sufficient (M = 3.318), whereas, Department of the Army civilians tended to disagree (M = 2.560).

ANOVAs also were accomplished on time variables (see table 5). Again, no significant differences were noted except for the variable associated with whether PAOC should allow more time for environmental issues (F = 6.01, p < .05). Military respondents tended to disagree with the statement (M = 2.318), whereas, civilians tended to be neutral or slightly agree with the statement (M = 3.160).

ANOVAs were computed on variables associated with public affairs officials' confidence in their environmental

Table 4

Differences between military and Department of the Army civilians concerning environmental curriculum*

CURRICULUM

<u>Variable</u>	F value	p value
Acad Demanding	0.02	. 8907
Faculty	0.68	.4126
Preparation	2.43	.1259
Teaching Methods	5.72	.0210**
Current	0.36	.5525
Relevancy	3.78	.0582
Emphasis	0.13	.7213
Evolution of Concern	0.02	. 8872
Laws	0.44	.5114
Remediation	0.09	.7663
Env. Impact Statement	0.02	.9031
Comp & Liab. Act	1.22	.2765
Case Studies	0.97	.3315
Teach Other Issues	0.99	.3240

^{*} tests for significant differences between answers by military officers and their civilian counterparts

^{**} Statistically significant at the .05 level

Table 5

Differences between military and Department of the Army civilians concerning environmental training time*

TIME

<u>Variable</u>	F value	p value
Suff. Time	0.86	.3577
Less Time than other subjects	1.29	.2613
Evolution of Concern	0.30	. 5859
Laws	0.25	.6178
Remediation	1.13	.2945
Env. Impact Statement	0.03	.8678
Comp & Liab. Act	0.67	.4174
Case Studies	1.81	.1865
Extend Course	6.01	.0182**

^{*} tests for significant differences between answers by military officers and their civilian counterparts

^{**} Statistically significant at the .05 level

communications capabilities (see Table 6). No significant differences were noted on any confidence variables. For the most part, military officers and Department of the Army civilians expressed similar levels of confidence when dealing with environmental issues.

Finally, a series of chi squares were performed on questions dealing with respondents' confidence with environmental communications after they have completed the course (see Table 7). Expected frequencies for each value on the five point Likert Scale were compared with actual frequencies received.

Respondents generally believed the training was not useful in their next assignment ($X^2 = 17.722$, p<.01) with only eight respondents believing it to be useful. Respondents do not feel confident when advising the commander or commander's staff about environmental communication issues ($X^2 = 10.275$, p<.05). Only 12 respondents agreed or strongly agreed with the statement. Respondents do not feel confident when speaking with news media representatives concerning environmental issues ($X^2 = 17.912$, p<.01). Ten out of forty-seven respondents agreed with the statement that they feel confident. Respondents do not feel they are well versed in environmental issues ($X^2 = 11.807$, p<.05). Thirteen of the forty-seven respondents agreed or strongly agreed that they are well versed on environmental issues.

Respondents generally seek outside assistance from other agencies concerning environmental issues ($X^2 = 17.934$, p<.01). Thirty-eight respondents were neutral, agreed or strongly agreed that they seek outside assistance.

Respondents strongly believed they can effectively communicate risk information to the public $(X^2 = 27.721, p<.01)$. Only nine respondents disagreed or strongly disagreed that they could communicate risk information.

Finally, respondents tended to be neutral concerning whether the environmental training provided was very good preparation for the demands placed on a public affairs officer $(X^2 = 12.636, p < .05)$.

Table 6

Differences between military and Department of the Army civilians concerning individual confidences*

CONFIDENCE

<u>Variable</u>	F value	<u>p value</u>
Follow	1.48	.2300
Advising	0.65	.4247
Media	0.43	.5179
Versed	0.19	.6680
Assist	2.71	.1071
Qualified	0.19	.6650
Risk	0.27	.6044
Demands	0.21	.6470

 $[\]mbox{*}$ tests for significant differences between answers by military officers and their civilian counterparts

Table 7
Respondents' confidence with regard to environmental issues

CONFIDENCE

<u>Variable</u>	X^2 value
Follow	17.722**
Advising	10.275*
Media	17.912**
Versed	11.807*
Assist	17.934**
Qualified	8.806
Risk	27.721**
Demands	12.636*

^{*}Significant at the .05 level

^{**}Significant at the .01 level

Chapter V

DISCUSSION

Conclusions

The data collected tend to support the belief that the environmental training conducted during the PAOC contributes very little to the confidence of the public affairs officer.

The environmental curriculum and the time dedicated to teach it should both contribute to an individual's confidence in dealing with environmental issues.

Respondents believed the curriculum was generally correct, but said more issues need to be addressed and more time built into the overall PAOC curriculum for environmental issues. The lack of confidence expressed by so many respondents is most likely caused by the widely held view not enough time was devoted to environmental education at PAOC. If more time were provided, more information could be covered at a much slower pace. Environmental issues are often complex. The terminology is difficult to grasp, and appropriate laws and regulations change on a regular basis.

Hypothesis one stated that both active duty military officers and Department of the Army civilians at Army bases with environmental concerns will believe more time needs to be allocated to environmental training than will public affairs officers at bases/activities with few or no environmental concerns. This hypothesis was supported by the data. Richard O. Peters said that by having many

different types of course offerings within any given curriculum, each subject is usually superficial and shallow for lack of adequate time (7). Any number of reasons could exist for the respondents' believing this way. Many could believe the material was too complex to be rushed through while others think they had just scratched the surface on environmental issues and believe one should have received more. Even instructors were critical of the time dedicated to environmental issues. One respondent commented, "There was only one session, a couple of hours. The instructor acknowledged more time was needed." If this is the case, the course administrators should listen to their instructors. Another student stated, "It [the training] was rushed and probably too much all at once considering all other things being addressed during the course."

Hypothesis two stated public affairs officers (both active duty and Department of the Army civilians) at Army bases/activities with environmental concerns will believe that the environmental portion of the curriculum is less adequate than public affairs officers located at bases/activities with few or no environmental concerns. With regards to this hypothesis, it must rejected. An overwhelming number of respondents believe the type of material being covered is sufficient. The respondents do believe additional environmental subjects should be added to the curriculum.

Many respondents' open-ended comments were very critical of the environmental curriculum. Even though the hypothesis was not accepted, one needs to be mindful of the comments provided by the respondents. One respondent wrote, "I truly believe this is one of the most pressing issues today. Like it or not, whether you find it fascinating or boring, it is very much something that public affairs personnel must be familiar with. Environmental issues are in the news every day and no one knows when their facility may make news. I wish we had received more information. I wish it had been presented as being just as important as the other aspects of public affairs. I would encourage the instructors to reconsider their environmental teachings and expand them. All public affairs officers must be aware and conversant in all aspects of environmental issues. I wish I had more time in my present job to concentrate on it."

To say that more time should be added to the environmental curriculum and that the material should be changed to reflect the information contained in this study is one thing. To actually do it, is another.

Money would have to be invested and possibly the faculty would need to receive comprehensive training on environmental issues. To extend the Public Affairs Officer Course would require additional funds for temporary duty expenses for each student. It could also reduce the number of individuals graduating from PAOC each fiscal year, and

could hinder public affairs operations at many installations while their public affairs officials are away even longer.

Changing the curriculum would be easier than changing the time. The Defense Information School should take an interest in the information being presented. The Army's Environmental Strategy should see education and training as critical elements of environmental stewardship. The strategy should see education and training as cornerstones of the Army's success in environmental communications and should acknowledge that proper education will play a crucial role in implementing changes within the Army to promote environmental stewardship.

Hypothesis three stated that both active duty officers and civilians would have similar views. This hypothesis should be accepted. Both officers and civilians throughout the study had similar views on time, curriculum and confidence. The views of the officers and civilians only differed significantly on two issues.

The first difference is on the teaching methods employed by the environmental instructors. This difference could possibly be due to the fact that military officers serve as the primary environmental instructors. Civilian were more critical of individuals who are not their peers, possibly believing that they could have done a better job. Also, civilian respondents may believe the military education process is too regimented and would desire an

atmosphere more like a university. Military officers, on the other hand may not be as critical, giving the benefit of the doubt to military instructors and their teaching methods.

The second difference was whether PAOC should be extended to allow more time for environmental issues. Military officers said the course should not be extended, but civilians tended to be neutral or slightly agree the course should be longer. There is a likely explanation for this difference. Department of the Army civilians tend to remain in a particular job longer than their military counterparts, therefore increasing the likelihood that they may encounter more environmental communications problems on a more frequent basis. Military personnel usually serve in one position no longer than four years and no less than two. This finding is also significant in that extending the course would require more time away from family and friends for both civilian and military personnel. It could have been expected that neither civilians nor military personnel would desire to have the course extended beyond ten weeks.

Many believe there are significant differences between military officers and civilians, but when it comes to education and training, they apparently approach them with the same scrutinizing eye.

Hypothesis four stated public affairs officers, both civilians and officers, would believe they are inadequately

prepared to deal with environmental communications. After receiving six hours of environmental training, respondents should have some confidence. This seems to be untrue. Public affairs officers are uncomfortable dealing with environmental issues and believe they could not effectively advise a commander or his staff on environmental issues, let alone speak with media representatives and the public about environmental issues.

Joseph M. Petulla, director of the graduate program in environmental management, University of San Francisco, believes a solid curriculum will provide both the technician and generalist with the background needed in the environmental field for critical problem solving and thinking. If DINFOS had a solid environmental package, then public affairs officers would have enough information and the correct information to conduct effective problem solving. If public affairs officers believe they can deal with environmental problems, then their confidence will increase.

The Army, especially the public affairs community, must take the results of this study seriously. The environmental strategy and the implementation plans are already in place. Both require public affairs officers to be well educated in environmental issues in order that they may be able to effectively communicate a wide spectrum of information concerning the environment to the Army's various publics.

Failing to educate all public affairs officers properly in this area could place senior Army commanders in undesirable circumstances.

This study has shown a lack of confidence by many public affairs employees, even after they have received environmental stewardship training. They believe the time dedicated to environmental issues is insufficient, but do believe the course content is on target with expectations. The study revealed that most respondents rarely deal with environmental issues on a regular basis and therefore believe the environmental training is not useful. But, at the same time, respondents believe if a environmental crisis were to happen they would not be adequately prepared.

The environment has quickly become a national priority. The Army can no longer ignore the environmental problems it has created. The Army must now take a more positive stance to ensure that the environmental problems of the past are corrected and that future environmental problems can be properly disposed of and in some instances averted. To do this, the Army must have highly qualified public affairs officers properly educated on environmental issues and capable of communicating environmental stewardship to all soldiers, the media, and most importantly to the general public, which is the most important target audiance.

Suggestions for Future Study

This study was very restrictive in that it only looked at

the environmental training taking place within the Public Affairs Officer Course since April 1992. Subjects also were very limited in that only individuals who were graduated from the course since April 1, 1992, were surveyed. It may be wise to expand this research and to survey a sample of all public affairs officials to see how much time they think is adequate and what subjects need to be included in the environmental portion of the course.

This study should also be replicated so that the limitations discussed earlier can be answered.

The Army's environmental experts officers within the Staff Judge Advocate's Office also need to be asked about the environmental curriculum. These two groups may provide information on the subjects that need to be taught.

The study looked at only subjects currently being taught. No attempt was made to determine what should be taught. The respondents overwhelmingly agreed that other subjects need to be addressed. A study could be undertaken to determine exactly what subjects need to be addressed and the amount of time needed for each.

Additional research could determine the best possible placement of the environmental training package. One respondent believed the training needed to be moved closer to the beginning of the course when student interest is still relatively high. It is now conducted near the end of the 10-week course. Any future research should look at the

appropriate placement of this critical training.

This study did not attempt to gather information concerning the actual functions performed by public affairs officers on a weekly basis concerning environmental issues. What is clear is that 35 out of the 47 respondents spend between one and ten hours per week with environmental issues (see Appendix C: Demographics). Additional research needs to investigate environmental functions performed by public affairs officers. This may shed light on the impact the environment is having on Army public affairs.

Appendix A

Instrument

This questionnaire is designed to be part of a comprehensive program review of the environmental training in the Public Affairs Officer Course at the Defense Information School. Your participation is very important, and you are encouraged to respond thoughtfully and candidly. Results will be summarized and reported only for groups. In no instance will responses of individuals be reported. Your responses will be confidential and will not be disclosed under any circumstances. Please answer the following questions by either circling the appropriate response or by filling in the blank. 1. Are you male or female? 1. male 2. female 2. What is your age? 3. Have you successfully completed the Public Affairs Officer Course? 1. yes 2. no If yes, when did you graduate? 4. What is your rank or appropriate civilian grade? 5. What is your primary MOS (job title for DA civilians)? 6. (DA civilians please skip) What is your functional area? 7. (DA civilians please skip) What is your current position/title? 8. How many years active federal commissioned service do you currently have? 9. If you graduated from the Public Affairs Officer Course, did you receive any training on Environmental Stewardship/Issues? 1. yes 2. no 10. If you have obtained a bachelor's degree, in which discipline did you obtain your degree? 11. Do you have a master's degree? If yes, please indicate degree and discipline (i.e., Master of Arts in Journalism). 1. yes 2. no

Continued on Next Page

12. How many hours were allocated for environmental training during the Public Affairs Officer Course?		- 1			
13. On average, how many hours a week do you spend with environmental issues?		-		·	
14. Is your current installation on the "Superfund list" for environmental clean-up?	1. y	yes 2. 1	no		
15. Has your installation experienced any of the following environmental years? Please check all that apply. If you know of others not listed	-			-	ive
□ ground water contamination □ runoff from urban areas/farms □ noise pollution □ storage of hazardous waste □ surface water contamination □ industrial/municiple waste water discharge □ land use management □ asbestos □ chemical/nuclear munitions storage □ accidental release of toxins		endangered solid waste hazardous v sewage disp air pollutio	manage vaste site oosal		
16. Does your installation have a separate environmental office with its own public affairs activity?	1. y	es 2. 1	no		
To what extent do you agree with the following statements about the envishile attending the Public Affairs Officer Course? Please give your opin recollection of your experiences.					eived
Please answer the following questions by circling the number correspond	ling	to the sca	le belov	w.	
5 = Strongly Agree (SA). You agree strongly with the statement. 4 = Agree (A). You agree more than you disagree with the statement 3 = Neutral (N). You neither agree nor disagree with the statement. 2 = Disagree (D). You disagree more than you agree with the statement 1 = Strongly Disagree (SD). You strongly disagree with the statement	ent.				
	SA	A	N	D	SD
17. The environmental training was academically demanding	5	4	3	2	1
18. Faculty members were prepared to teach environmental issues	5	4	3	2	1
19. The curriculum for environmental issues was appropriate in preparing public affairs officers for environmental challenges	5	4	3	2	1
20. Teaching methods for environmental training were sufficient	5	4	3	, size	1
21. The environmental training was current	5	4	3	2	1
22. The environmental training gave students a firm understanding of all relevant environmental issues	5	4	3	2	1

Continued on Next Page

	Strongly Agree (SA) 5	Agree (A)	Neutral (N)	Disagree(D)		Strong	ly Disa 1	grec(SD)
					SA	A	N	D	SI
23.	The same emphasis was placed on other subjects				5	4	3	2	1
24.	Information presented or governmental concern a		-	•••••	5	4	3	2	1
25.	Information presented o	n environmen	tal law was nece	ssary	5	4	3	2	1
26.	The discussion of remed	liation was nec	cessary	• • • • • • • • • • • • • • • • • • • •	5	4	3	2	1
27.	Information presented of process was necessary.		-		5	4	3	2	1
28.	Information presented on the Community Relation	-		•	5	4	3	2	1
29.	Discussion of case studi		•		5	4	3	2	1
••			. 1 111 .	1.1.	SA	A	N	D	SE
<i>3</i> 0.	Other issues relating to the Public Affairs Office				5	4	3	2	1
31.	Sufficient time was allocourse				5	4	3	2	1
32.	More time was provided was provided to environ	-			5	4	3	2	1
33.	More time needs to be a concern and activities h				5	4	3	2	1
34.	More time needs to be a environmental law				5	4	3	2	1
35.	More time needs to be a remediation				5	4	3	2	1
36.	More time needs to be a statement			-	5	4	3	2	1
37.	More time needs to be a Liability Act and the Co		-		5	4	3	2	1

Strongly Agree(SA) 5	Agree(A)	Neutral(N)	Disagree(I))	Strongly Disagree(SD) 1				
		V		SA	A	N	D	SD	
38. More time needs to be	e devoted to ca	se study discussi	ons	5	4	3	2	1	
39. The Public Affairs Of more time to be dedicated				5	4	3	2	i	
40. Environmental training public affairs commune Environmental Strate	nity with respe	ct to carrying out	the Army's	5	4	3	2	1	
41. The environmental tra	_			5	4	3	2	1	
42. I feel confident when environmental commi	_			5	4	3	2	1	
43. I feel confident when concerning environment		_		5	4	3	2	1	
				SA	A	N	D	SD	
44. I am well versed in en	vironmental is	sues		5	4	3	2	1	
 I often seek assistance environmental issues. 	_		_	5	4	3	2	1	
46. I am qualified to hand environmental emerge	-		•	5	4	3	2	1	
47. I can effectively com	nunicate risk i	nformation to the	public	5	4	3	2	1	
 The environmental tra preparation for the de 				5	4	3	2	1	

Questions 49 & 50 are open-ended questions that allow you to provide additional comments on the time allocated to environmental training and to the environmental curriculum. These two questions are voluntary.

49. Please provide any additional comments you may have concerning the time provided for environmental training (continue on back if necessary):

Continued on Next Page

50. Please provide any additional comments you may have concerning the environmental subjects covered or not covered throughout the course (continue on back if necessary):
Please return your completed questionnaire in the envelope provided or send it to: CPT Thomas A. Moyer, 1550 Washington Blvd., Huntington, WV 25701.
THANK YOU FOR YOUR PARTICIPATON

Appendix B

Cover Letters

Marshall University

W. Page Pitt School of Journalism and Mass Communications Huntington, West Virginia 25755

Xxxx X, 1993

John R. Smith 123 Main Street Anywhere, NY 11111

Dear Mr. Smith:

The attached questionnaire was developed as a tool to provide a comprehensive evaluation of the environmental training offered as part of the Public Affairs Officer Course at Fort Benjamin Harrison, Indiana.

The questionnaire will be used to fulfill my thesis requirements for graduation at Marshall University, Huntington, West Virginia.

The results obtained from the survey will only be reported by groups. No individual responses will be reported. I ensure total confidentiality. In no instance will any individual responses be provided to Marshall University or the Department of the Army.

Please take an opportunity to complete the enclosed questionnaire and return it in the self-addressed stamped envelope by June 23, 1993. Your participation will be greatly appreciated.

Sincerely,

THOMAS A. MOYER Captain, Field Artillery United States Army

Enclosure

Marshall University

W. Page Pitt School of Journalism and Mass Communications Huntington, West Virginia 25755

Xxxx X, 1993

John R. Smith 123 Main Street Anywhere, NY 11111

Dear Mr. Smith:

This is the second mailing of a questionnaire developed as a tool to provide a comprehensive evaluation of the environmental training offered as part of the Public Affairs Officer Course at Fort Benjamin Harrison, Indiana.

The results obtained from this survey will provide the Department of the Army with critical information necessary to adjust the environmental curriculum currently being taught at Fort Benjamin Harrison. This could ultimately lead to more qualified public affairs officers in the area of environmental stewardship, a topic gaining widespread attention in the post Cold War era.

In order for the results of this survey to be valid, I need to have a large percentage of the surveys returned as soon as possible. Your individual response is important for this study.

The results obtained from the survey will only be reported by groups. No individual responses will be reported. I ensure total confidentiality. In no instance will any individual responses be provided to Marshall University or the Department of the Army.

Please take an opportunity to complete the enclosed questionnaire and return it in the self-addressed stamped envelope. Your participation will be greatly appreciated.

Sincerely,

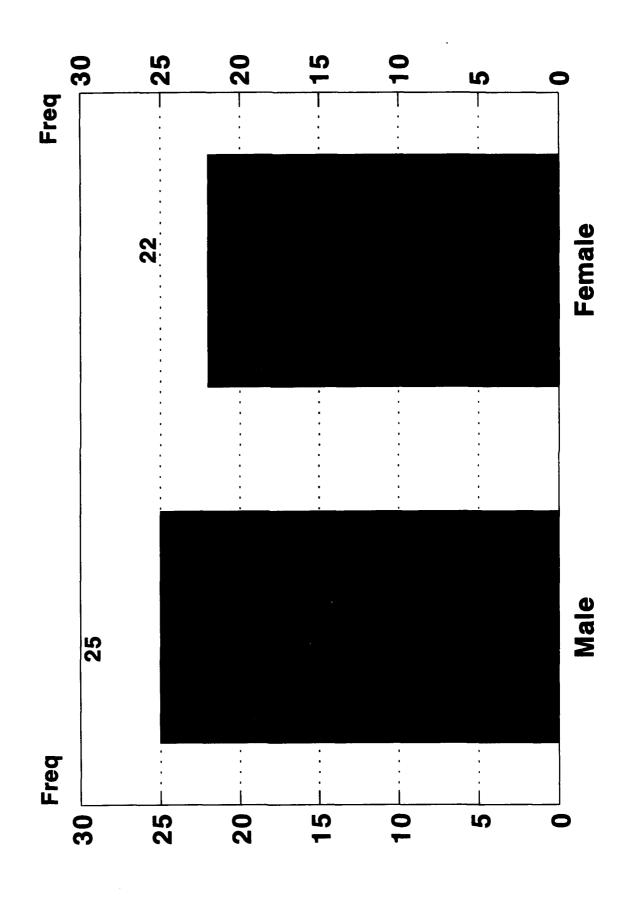
THOMAS A. MOYER Captain, Field Artillery United States Army

Enclosure

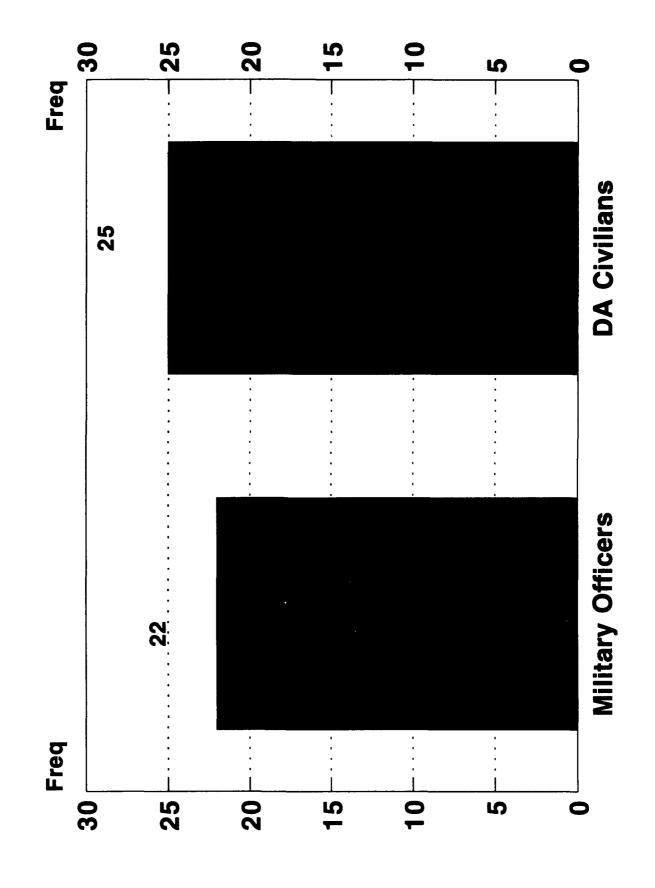
Appendix C

Demographic Information

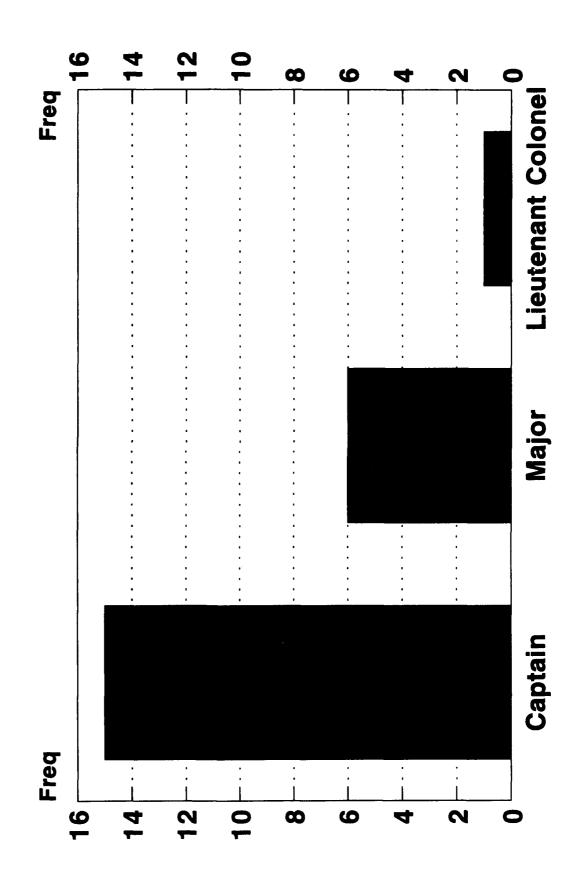
X 当 S



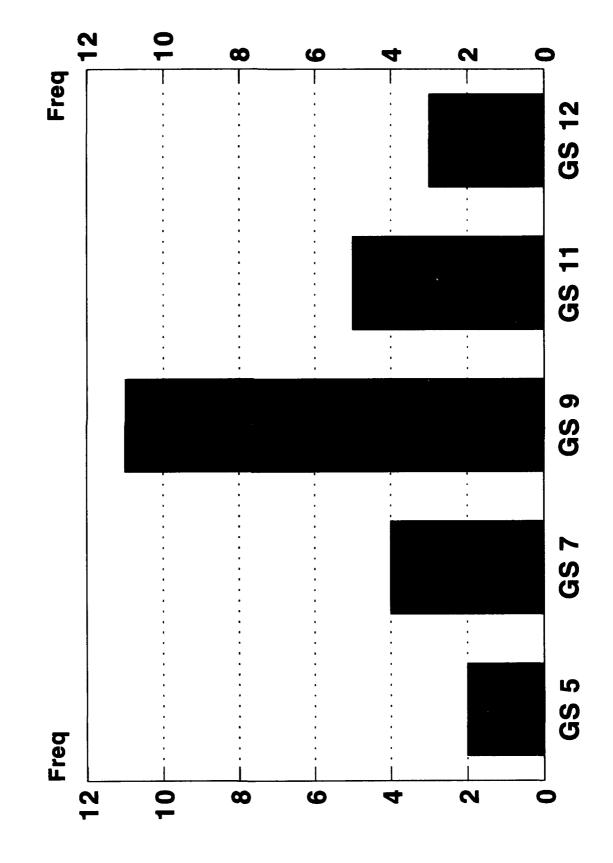
Military Officers/DA Civilians



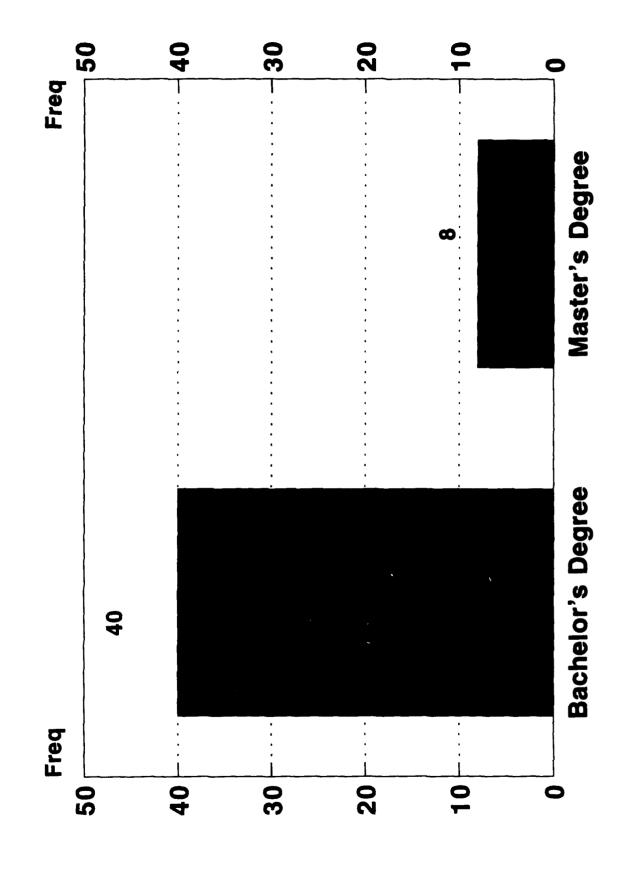
Military Officers Rank



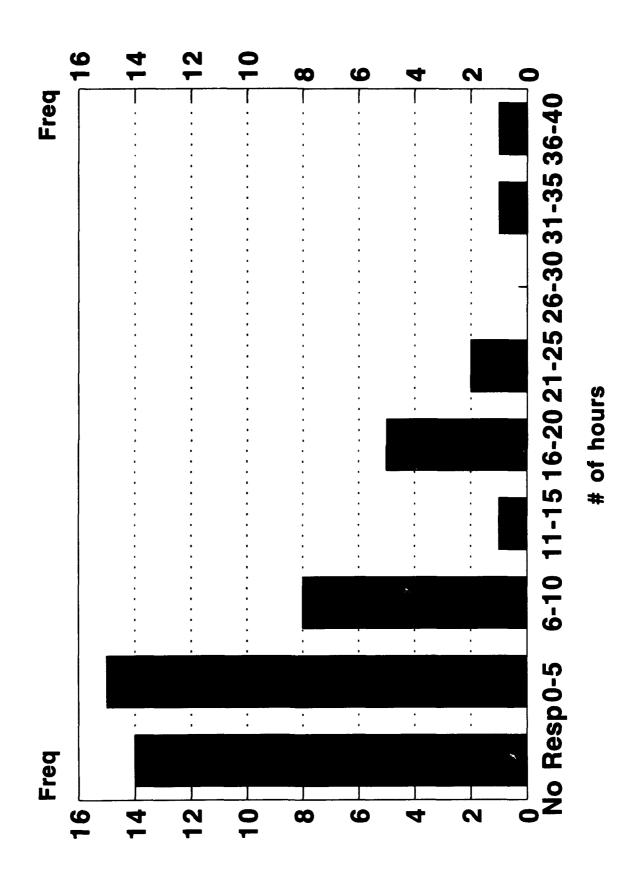
Department of the Army Civilians Grade



Bachelor's/Master's Degree

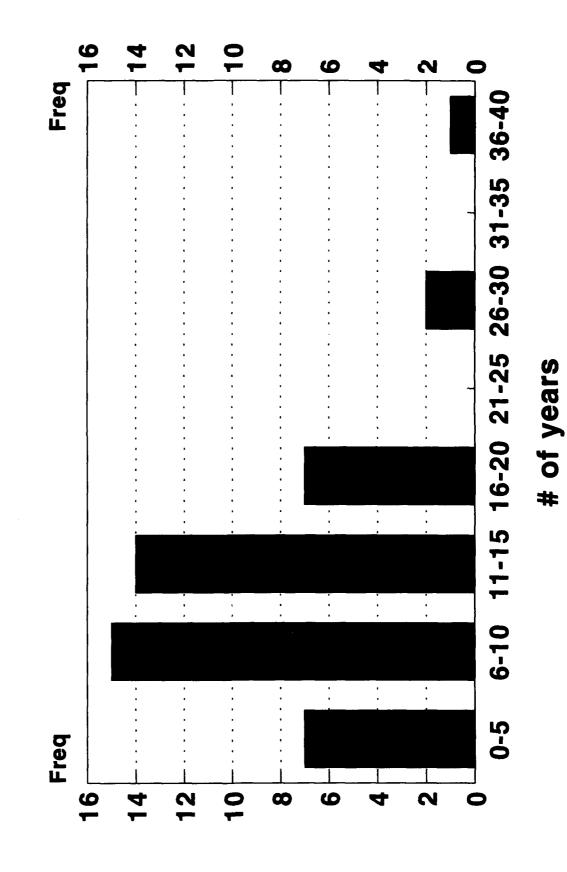


ENVIRONMENTAL TRAINING HOURS



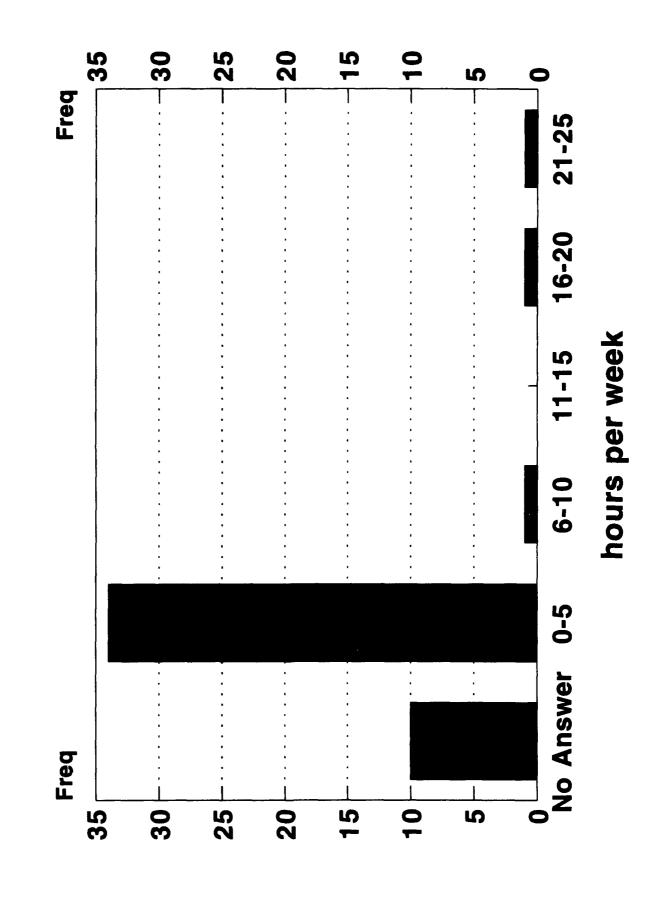
of hours respondents said they rec'd

YEARS OF SERVICE Officers and Civilians

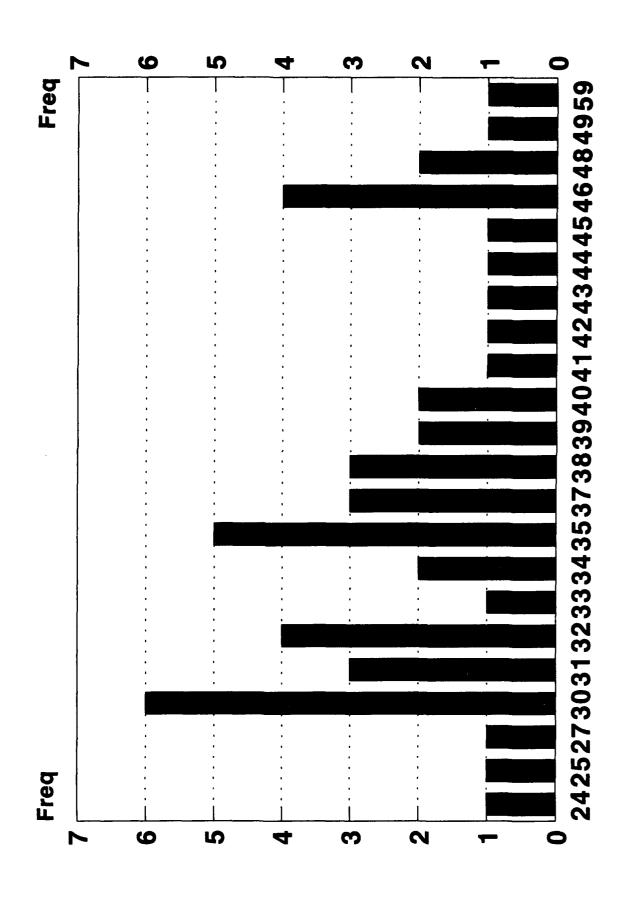


HOURS SPENT WITH ENVIRONMENTAL ISSUES

Per Week



AGE



Appendix D

Respondent's Comments

RESPONDENT'S COMMENTS

01: "Two months after graduating DINFOS, I was appointed the base PA [Public Affairs] environmental coordinator. Only after I began reading and learning about the issues, did I realize how little we learned. The instructor, although he knew the subject well, was not a very effective teacher. He was a nice guy, just not a good speaker. Unfortunately people tuned him out.

I went to the Air Force IRP course at Wright-Patterson, AFB [sometime after DINFOS]. That course gives an excellent overview of the program and issues involved. Unfortunately, out of a class of over 50, only three were Public Affairs - not much cross-feed opportunity.

I truly believe this is one of the most pressing issues today. Like it or not, whether you find it fascinating or boring, it is very much something that public affairs personnel must be familiar with. Environmental issues are in the news every day and no one knows when their facility may make news. I wish we had received more information. I wish it had been presented as being just as important as the other aspects of public affairs.

I would encourage the instructors to reconsider their environmental teachings and expand them. All public affairs officers must be aware and conversant in all aspects of environmental issues. I wish I had more time in my present job to concentrate on it."

- "[DINFOS must] have more case histories, do role playing, enact actual scenarios developing the public affairs role, give step by step instructions on how to proceed, what you do and when you do it plus how (samples) you go about doing it."
- 02: "My unit is tenant. The post public affairs handles environmental issues as well as other post-wide issues."
- 03: "The staff provided my class with a brief overview of environmental issues. I know I could not effectively relay information concerning the environment."
- 06: "Environmental training at PAOC [Public Affairs Officers Course] was at best a patchwork sham. It was never truly a stand alone subject area. It was rather, a sub-area discussed for maybe 6 8 hours as

part of community relations. As you are doubtless aware, the environment especially in the DC [District of Columbia] area has become a major public affairs issue, particularly in Maryland. JAG [Judge Advocate General] interface is intensive for the public affairs officers as they grapple with local and state ordinances and compliance. We were never taught JAG interface or staff coordination on this issue. We depend on not just federal policy, but liturgical guidance in preparing responses to community inquiries on this subject. Further, the Army-specific training for my class was abysmal. We had an Air Force captain teach Army specific public affairs the final four Give me a break. If PAOC is required for branch qualification at least have one of our own teach it. Just how dedicated is the Army to this school? This was our question.

07: "There was only one session, a couple of hours. The instructor acknowledged more time was needed. The staff should eliminate the sessions on brevity (which took 3 hours) and some Introduction/History of Public Affairs to focus on environmental [issues]. We need it. This is a big public affairs issue and needs a lot more emphasis."

"Case studies are helpful. Basics of what happens to a base when it makes an environmental hit list. Where to go for help and information. How base closure affects the environment of the base and what we have to go through, environmentally, before you can even set a realistic closing date."

- 08: "The public affairs area of work is challenging and rewarding for the individual willing to learn new things on a continuous basis. Although DINFOS was also challenging and worthwhile, there is no replacement for hands on training and experience. Text book training is good in theory, but not worth 'a darn' when the media has your back against the wall in a interview or you are being quoted in a article. How quick one can loose his/her job becomes a constant reminder to always be slow in giving quick and easy responses. My common sense will keep me afloat in the public affairs specialty. I always get the facts and then the advice of other public affairs practitioners to include the Pentagon OCPA [Office of the Chief for Public Affairs] staff."
- 09: "Focus on correction of deficiencies needs to be the way material is taught, not content of material or time allocated."

- 12: "Great overview. Any further discussion should be in a class devoted to environmental concerns."
- 13: "The training received was short, but informative. In light of the attention being focused on the environment by the Vice President and the DoD [Department of Defense], DINFOS could not error in reworking the POI's [programs of instruction] to include additional blocks of instruction."
- 14: "I remember virtually nothing about the environmental training I received at PAOC."

"Although several people attending the course specialized in this area, issues and terms were barely mentioned. When I attended, I do not believe any of the instrctors had an interest in this area or expertise in this area. The public affairs officer at [my post] does not have anyone specifically trained in this area. DEH [Directorate of Engineering and Housing] provides subject matter experts to assist our shop in all environemntal issues. Currently we have no major environmental issues, although this may change."

- 18: "I honestly feel that the environmental training left a lot to be desired. With the environment being a number one topic very little was taught. This is why I feel I could not effectively communicate the issue to the public."
- 23: "Use current environmental training as core training, then, identify those students who either are currently assigned to duties involving environmental issues or those who can reasonably expect to deal with those issues in the future. Then, provide additional military-specific (or service specific) environmental training for those students."

"Guest lecturers who are experts in environmental law (JAG officers with relevent experience) should be brought in."

26: "More time is required to discuss process for remediation and interaction with governmental environmental agencies."

"Critical for understanding of roles of supporting and/or directive governmental agencies (state and federal) which is vital for coordination of 'one-voice' concept."

- 29: "I agree that the Public Affairs Officer Course needs to dedicate more time to environmental issues, but PAOC does not need to be extended. The course length is more than adequate to include more time dedicated to environmental issues, time management is the issue. The environment is one of the key issues today and will be ever more present in future public affairs officer activities. The basic course of study at PAOC needs to dedicate more time to this issue. This was an obvious area that instructors were not prepared to discuss and specialists could have been brought in to assist."
- 32: "The subject was covered very well within the current course framework. Course would definitely need to be extended for any more in-depth discussion."
- 33: "The PAOC provided training to be proficient in the field of public affairs. The PAO must be well versed in all areas to include environmental issues, however, the course could not possibly provide training on all issues of public affairs."
- 34: "Replace some of the useless junk with more meaningful environmental subjects."
- 35: "A co-worker attended DINFOS this past spring and said environmental issues were stressed in his class. Under today's mandate on the environment, DINFOS would be doing any one appointed to be a spokesperson in DOD an extreme injustice to not teach this subject. In the interest of time, take home references may be needed to supplement course work."
- 36: "It was rushed and probably too much all at once considering all other things being addressed during the course."
- 37: "The instructor was not adequately prepared to teach, therefore the classes were boring. Students were read to and not stimulated to learn."
- 38: "The material covered during the time allocated was good, but it was presented in a 'dry' fashion.
 Instructors need to make their material a little more exciting."

"The environmental training during the course needs to be placed towards the beginning of the course, not at the end. This may enhance a better understanding of the materials presented and also add to the other subjects covered during the entire course."

- 39: "Time provided, I feel, was adequate. So much of the material was totally new to many people, and many in the class found it overwhelming. To add more time for even more environmental information would have been counter productive in my opinion. What the classes did provide was an overview and gave us an awareness that was important. I do feel all public affairs specialists need to attend separate environmental classes that are devoted just to environmental issues, laws, cases.... This is such an important area. The PAOC course can in no way make one qualified to handle all environmental emergencies that may come up. That is also not its intent, in my opinion."
- 40: "Additional time needs to be considered regarding dealing with the public, risk communication, etc."
- 41: "Unless you deal with environmental issues on a daily basis you cannot remain current. The issues, laws and regulations change so frequently you just do not have enough time to devote to the concerns. The environmental office on this installation deals with all environmental issues. I feel the time provided for environmental training at DINFOS was sufficient."
- 43: "It is difficult to cover all of the material in 10 weeks, but environmental [issues] are increasingly important and the curriculum should reflect that."

"More case studies would be helpful."

- 44: "Cut out the political world tour. Devote time saved to environmental/community relations."
- 47: "The information that was presented was useful from the standpoint that it was all new to me. It was all good information to keep in my hip pocket. Someone else in the office handles all environmental issues so it is tough for me to tell how well prepared the school may have left me."

BIBLIOGRAPHY

- Army Environmental Policy Institute, <u>U.S. Army</u>
 <u>Environmental Strategy Into the 21st Century</u>, 1992, 2.
- Chess, Caron. "Attacking a Problem With the Facts." <u>EPA</u>
 <u>Journal</u> 18 (May/June 1992): 46-48.
- "COE News Bullets: Army Environmental Program." <u>Public Affairs Monthly Update</u> 2, no. 7 (April 1992).
- Department of the Army, Office of the Secretary of the Army. "Public Affairs Campaign Plan: Environmental Stewardship." Oct. 1992.
- Dunlap, Riley E. and Rik Scarc. "Environmental problems and Protection." <u>Public Opinion Quarterly</u> 55 (Winter 1991): 651-672.
- Engleson, David C. <u>A Guide to Curriculum Planning in Environmental Education</u>. ERIC, 1985. ED 264 134.
- Forbes, Jean. "Environmental Education Implications for Public Policy." The Environmentalist 7 (1987): 131-142.
- Fortner, Rosanne W. "Information Conferences as Tools for Environmental Communication Training." The Journal of Environmental Education 17 (1985/86): 14-19.
- Garmulewicz, Liza I. Art and Music: The Essential Aesthetic Components of Holistic Environmental Education. ERIC, 1986. ED 266 936.
- Grunig, Larissa A. Environmental Activism Revisited: The Changing Nature of Communication through Organizational Public Relations, Special Interest Groups and the Mass Media. Monographs in Environmental Education and Environmental Studies, Volume 5. ERIC, 1989. ED 304 332.
- Hall, N. Susan. An Introduction to Public Affairs and the Environment. Defense Information School Publication, no. PB.P1202 (Fort Benjamin Harrison: Public Affairs Department, 1992).
- Hall, N. Susan. The Role of Public Affairs in the Environmental Impact Statement (EIS) and the Installation Restoration Plan (IRP) Process. Defense Information School Publication, no. PB.P1302 (Fort Benjamin Harrison: Public Affairs Department, 1992).

- Hall, N. Susan. <u>Environmental Problems</u>. Defense Information School Publication, no. PB.P1402 (Fort Benjamin Harrison: Public Affairs Department, 1992).
- Harrison, E. Bruce. "A Quality Approach to Environmental Communication." <u>Total Quality Environmental Management</u> 1(1992): 225-231.
- Kiernan, David R. "From the Chief, Command Information Division," <u>Public Affairs Monthly Update</u> 2, no. 7 (April 1992).
- Larson, Mark A., Don Zimmerman, and Cliff Scherer.

 "Communication Behavior by Environmental Activists
 Compared to Non-Active Persons." The Journal of
 Environmental Education 14 (Fall 1982): 11-20.
- Marshall, M.E. and David W. Mayer. "Environmental Training: It's Good Business." <u>Business Horizons</u> 35 (Mar/Apr 1992): 54-57.
- Mathews, Bruce E. <u>Incorporating Outdoor and Environmental</u> <u>Ethics in Your Program</u>. ERIC, 1990. ED 330 508.
- Moyad, Andrew H. "A Report Card on Environmental Education." The Environmental Forum 7 (Jan/Feb 1990): 37-42.
- Paulk, John and Lynn Hodges. "Environmental Education: The Future." <u>EPA Journal</u> 14 (Jul/Aug 1988): 36-37.
- Peters, Richard O. <u>Copeing With Environmental Education</u>

 <u>Program Development and Infusion Into the Global Studies</u>

 <u>Curricula of Rural Schools</u>. ERIC, 1984. ED 238 652.
- Petulla, Joseph M. "Professional Standards in Environmental Management." <u>The Environmental Professional</u> 7 (1985): 194-198.
- Sadowske, P. Sue and Judith G. Adrian. <u>Environmental Health</u> and Stewardship. ERIC, 1990. ED 326 618.
- Silas, C.J. "The Environment: Playing to Win." <u>Public</u>
 <u>Relations Journal</u> 46 (January 1990): 10 & 34.
- Slear, Tom. "Environment and the PAO: The Army Greens Up, Cleans Up." <u>Public Affairs Monthly Update</u> 2, no. 7 (April 1992).
- Stokes, David and Bruce Crawshaw. "Teaching Strategies for Environmental Education." The Environmentalist, 6 (1986): 35-43.